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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,133	09/23/2003	James Mentz	31626	2864

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EXAMINER

HUNNINGS, TRAVIS R

ART UNIT	PAPER NUMBER
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2632

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,133

Applicant(s)

MENTZ ET AL.

Examiner

Travis R. Hunnings

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5, 6, 8, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sacca et al. (Sacca; US Patent 6,373,377).

Regarding claim 1, Sacca discloses *Power Supply With Digital Data Coupling For Power-Line Networking* that has the following claimed subject matters:

The claimed communication device for receiving and transmitting communication signals is met by the network interface card (150) providing and receiving digital data (col2 38-58);

The claimed power supply connected between a power-line and the communication device for supplying power to the communication device is met by the power supply (140) being connected to a power line through a hot (H) terminal and a neutral (N) terminal (col4 3-4) and providing power to the network interface card (150; col3 59-61);

The claimed coupling means within the power supply for facilitating transmission of both line power and the communication signals, wherein an analog communication

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signal flows passively to the communication device through the power supply is met by the power supply containing an analog front end (146) and circuitry block (128) that provide data signals to the network interface card (col3 4-15) and providing power to the network interface card (col3 59-61). It would have been obvious to one of ordinary skill in the art to move the digital coupler 136 as shown in figure 1 to be 'within' the power supply itself as it would reduce the overall parts required for the device and make construction easier. The claimed 'communication signals flowing passively to the communication device through the power supply' is interpreted to mean the communication signals are not modified when transmitted from the power supply to the communication device which would be the case as shown in figure 1 after the digital coupler was moved to be within the power supply.

Regarding claim 2, Sacca discloses all of the claimed limitations. The claimed system wherein the coupling means facilitates transmission of both line power and the communication signals along a single connection is met by the device connecting to a power-line through a single connection containing a hot and a neutral terminal that allows both power and communication signals to pass along the connection (col1 52-67, col2 1-4 and figure 1).

Regarding claim 5, Sacca discloses all of the claimed limitations. The claimed system further comprising means for injecting the communication signals onto a ground-free low voltage direct-current path is met by the digital coupler transmitting data

between the power supply and the network interface card digitally (col3 4-28). It is inherent that digital communication is accomplished using a direct-current path as opposed to an alternating-current path. The term 'ground-free' is interpreted to mean a single wire that has a voltage applied to it without the need for a secondary wire to provide a ground reference for the voltage.

Regarding claim 6, Sacca discloses all of the claimed limitations. The examiner takes official notice that the claimed system further comprising a redundant ground-free low voltage direct-current path is well known in the art and therefore would have been obvious to one of ordinary skill in the art because the power supplies in personal computer systems such as the one disclosed by Sacca commonly have multiple redundant direct-current paths in order to connect multiple device components to the same power supply. The term 'ground-free' is interpreted to mean a single wire that has a voltage applied to it without the need for a secondary wire to provide a ground reference for the voltage.

Regarding claim 8, the claimed communication device for receiving and transmitting communication signals is met by the network interface card (150) providing and receiving digital data (col2 38-58);

The claimed power supply connected between a power-line and the communication device for supplying power to the communication device is met by the power supply (140) being connected to a power line through a hot (H) terminal and a

neutral (N) terminal (col4 3-4) and providing power to the network interface card (150; col3 59-61);

The claimed coupling means within the power supply for facilitating transmission of both line power and the communication signals, wherein an analog communication signal flows passively to the communication device through the power supply is met by the power supply containing an analog front end (146) and circuitry block (128) that provide data signals to the network interface card (col3 4-15) and providing power to the network interface card (col3 59-61). It would have been obvious to one of ordinary skill in the art to move the digital coupler 136 as shown in figure 1 to be 'within' the power supply itself as it would reduce the overall parts required for the device and make construction easier. The claimed 'communication signals flowing passively to the communication device through the power supply' is interpreted to mean the communication signals are not modified when transmitted from the power supply to the communication device which would be the case as shown in figure 1 after the digital coupler was moved to be within the power supply.

The claimed system wherein the analog communication signal and power output from the power supply are combined for transmission of both line power and the communication signals along a single connection is met by the device connecting to a power-line through a single connection containing a hot and a neutral terminal that allows both power and communication signals to pass along the connection (col1 52-67, col2 1-4 and figure 1).

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Regarding claim 11, the claim is interpreted and rejected as claim 5 stated above.

Regarding claim 12, the claim is interpreted and rejected as claim 6 stated above.

3. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sacca in view of Coutinho (US Patent 5,777,769).

Regarding claim 3, Sacca discloses all of the claimed limitations except for the claimed system wherein the coupling means comprises a high pass filter for transmitting the communication signals and rejected power-line frequencies. Coutinho discloses *Device And Method For Providing High Speed Data Transfer Through A Drop Line Of A Power Line Carrier Communication System* that teaches using a high pass filter to filter out the power line frequencies and deliver the communication signals to the terminal devices (abstract and col2 21-32). Replacing the AFE with a high pass filter would be a cheap alternative to provide the circuitry block with the communication signal that is on the power line. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sacca according to the teachings of Coutinho to use a high pass filter to transmit the communication signals while rejected the power line frequencies.

Regarding claim 9, the claim is interpreted and rejected as claim 3 stated above.

4. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sacca in view of Coutinho and further in view of Propp et al. (Propp; US Patent 4,815,106).

Regarding claim 4, Sacca and Coutinho disclose all of the claimed limitations except for the claimed system further comprising means providing transient protection for the communication device. Propp discloses *Power Line Communication Apparatus* that teaches using a surge protector in conjunction with the device in order to protect the electronics of the device from spikes in electric power (col5 18-19). Adding a surge protector to the device of Sacca and Coutinho would help to keep the device operating in the event of transient surges. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sacca and Coutinho according to the teachings of Propp to include a surge protector to protect against transient signals.

Regarding claim 10, the claim is interpreted and rejected as claim 4 stated above.

5. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sacca in view of Brown et al. (Brown; US Patent 4,514,594).

Regarding claim 7, Sacca discloses all of the claimed limitations except for the claimed system wherein the power supply comprises a transformer having a center tap to extract a low-voltage direct-current component without shorting the communication signals. Brown discloses *Power Line Carrier Telephone Extension System For Full Duplex Conferencing Between Telephones And Having Telephone Call Hold Capability* that teaches using a center tap transformer to provide DC power of 12 and 5 volts to the electronics of the phone system (col24 24-47). Including a center tap transformer in the power supply of Sacca would be an inexpensive addition to provide the needed DC power to the network interface card. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sacca according to the teachings of Brown to use a center tap transformer to provide low voltage direct current to the electrical components of the system. The examiner also makes note that it is well known in the art to use a center-tap transformer to power a voltage rectifier in order to achieve a low voltage direct current power source.

Regarding claim 13, the claim is interpreted and rejected as claim 7 stated above.

Response to Arguments

6. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis R. Hunnings whose telephone number is (571) 272-3118. The examiner can normally be reached on 8:00 am - 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRH


Thomas J. Mullen, Jr.
Primary Examiner
Art Unit 2632 12-31-08